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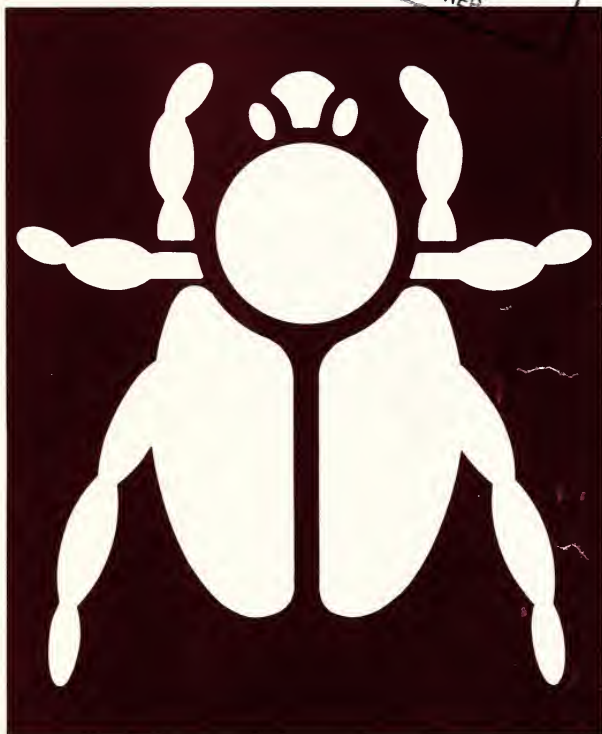
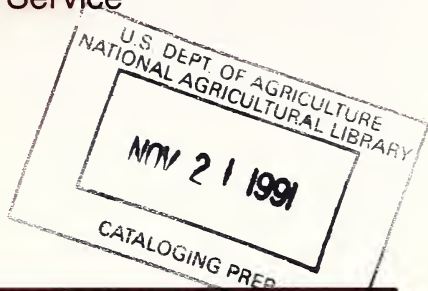
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States Department of Agriculture
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Entomologists in the Agricultural Research Service

About 10,000 species of insects in the United States are classed as public enemies, of which several hundred require some measure of control by humans. An even greater number of insects, such as parasites, predators, scavengers, and pollinators, are beneficial. The Agricultural Research Service (ARS) of the U.S. Department of Agriculture employs well-qualified scientists throughout the country to conduct research on methods for identifying and controlling harmful insects and enhancing the role of beneficial insects. Insects damage agricultural products of both plant and animal origin in the fields, during storage, in processing plants, in warehouses, in supermarkets, and in the home. Furthermore, insects affect humans through damage to their structures and by the transmission of diseases. ARS entomologists, often with other ARS scientists, have made many contributions toward chemical and nonchemical methods for prevention of costly damage by insect pests.

Research on biological pest control is conducted at many ARS laboratories in the United States. Most of the explorations for new insect parasites, predators, and weed-feeding insects are carried out from laboratories in Italy, France, Argentina, and Korea.

ARS entomologists originated the sterility principle of pest control and with this method have eradicated the screwworm fly from the United States and a major portion of Mexico. In this method, overwhelming numbers of screwworm flies are sexually sterilized through irradiation and released from the air to mate with native female flies. The result is race suicide. Adaptations of this method hold great promise for controlling populations of many insect species.

ARS scientists originated the male insect annihilation technique of combining an attractant with an insecticide, and were among the first to isolate and utilize natural attractants and growth regulators on insects. Traps baited with sex attractants are now used in many insect management programs.

Viruses and other diseases that kill other insect pests are also being produced in the laboratory and tested in infested fields. Scientists have identified virus diseases of more than 250 insect pests. When a virus infects the cells of its host insect, the cells produce virus instead of carrying out their normal functions. Scientists are studying conditions under

which the organisms live within the insects' bodies. With this information, large quantities of organisms can be reared to test this biological warfare approach. If man can use but a fraction of the several thousand diseases that attack insects in the wild, he will have a great choice of biological weapons.

Insecticides are generally effective and, in some instances, the only means available to control destructive insects. They have played a major role in protecting humans' health and well-being and will continue to be used in the foreseeable future. Through fundamental research, ARS entomologists are continuing to discover new mechanisms and novel strategies for control that can be integrated into pest management systems.

ARS entomologists have conducted research leading toward the eradication of parlatoria date scale, Hall scale, khapra beetle, cattle fever tick, an African tick, Mediterranean fruit fly, and other pests from the United States.

Typical Fields of Work for Entomologists Are:

- Studies of insect hormones and attractants for utilization as potential means of controlling insect pests.
- Investigation of plant-eating insects for the control of weeds.
- Evaluation of insect-resistant plant varieties.
- Modeling and simulation of insects, ticks, and mites that affect plants, animals, and humans.
- Investigations of gene function and other molecular biological studies.
- Description, enumeration, classification, and geographical distribution of insects, ticks, and mites.
- Foreign explorations for beneficial insects and insect enemies.
- Investigation of the biology, ecology, genetics, diseases, and management of bees for honey production and plant pollination.

- Studies of the effect of climate, food supply, and physiological conditions on the spread of stored-product insects.
- Studies on the integration of chemical and nonchemical methods of control for insect pest management programs.
- Role of insects as vectors of diseases affecting crops, animals, and humans.
- Investigation of fundamental physiology, biochemistry, and behavior and ecology of insects.

Employment Information

The positions are in the Federal civil service and are filled through competitive examinations, which are based on an evaluation of education, training, and experience. Appointments are based on qualifications without regard to race, color, religion, sex, age, nondisqualifying physical handicap, or national origin.

For additional information, examination announcements, or application forms, write to:

United States Department of Agriculture
Agricultural Research Service
Personnel Division
Building 003, BARC-W
Beltsville, MD 20705

Qualifications: Entomologists with bachelor's degrees in appropriate subjects are usually appointed at GS-5 or GS-7; those with master's degrees at GS-7 or GS-9; those with doctorates at GS-11. For appointment to positions at higher grade levels, progressively responsible research experience is required. Special emphasis is placed on the recruitment of well-qualified entomologists with graduate training, preferably through the doctorate level.

Work Locations: Well-qualified entomologists are employed throughout the United States and in several U.S. laboratories located in foreign countries.

Professional Growth and Recognition

Challenging problems.

Modern research facilities, equipment, and instruments.

Stimulating scientific environment.

Collaboration with outstanding scientists.

Scientific seminars and training programs.

Individual specialization and recognition.

Authorship for original research.

Advanced training opportunities.

Incentive and honor awards.

Career Benefits

Regular salary increases.

Promotion based on scientific achievement.

Liberal vacation and sick leave.

Low-cost health and life insurance.

Excellent retirement system.

Additional Opportunities May Be Available in:

Summer assignments for graduate and undergraduate students, postdoctoral fellows, and university professors and instructors.

Special assignments for postdoctoral research associates and professors on sabbatical leave.